In the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Upon entry of the present amendment, the claims will stand as follows:

Please cancel claims 10, 19, 28, 29, and 87 without prejudice.

Please amend claims 1, 7, 11, 36, 45, 53, 62, 70 and 79 as follows:

1. (Currently Amended) A method of enhancing collateral blood vessel formation in a subject comprising directly administering to sites in or adjacent to ischemic heart ~~or limb tissue~~ muscle a composition comprising an effective amount of cells of autologous bone marrow aspirate that have been transfected with at least one vector comprising an effective amount of a gene that expresses HIF-1, EPAS-1, MCP-1,GM-CSF, or a combination thereof, to induce collateral blood vessel formation in the muscle.

Claims 2-6 (cancelled)

7. (Currently Amended) The method of Claim 1, wherein the cells of autologous bone marrow aspirate ~~has~~ have been stimulated ex vivo by contact with at least one angiogenic cytokine.

Claims 8-10 (cancelled)

11. (Currently Amended) The method of Claim ~~10~~ 1, wherein the vector is a plasmid vector or an adenoviral vector.

Claims 12-35 (cancelled)

36. (Currently Amended) A method of improving the electrical conductivity of the heart of a ~~patient~~ subject with cardiac electrical pathway impairment, which comprises directly

administering an effective amount of autologous bone marrow aspirate to ischemic myocardium of the ~~patient~~ subject to induce collateral blood vessel formation and improve electrical conductivity therein as compared with non-administration of the autologous bone marrow aspirate.

Claims 37-44 (cancelled)

45. (Currently Amended) The method of Claim 36, wherein cells of the autologous bone marrow ~~has~~ have been transfected with at least one vector comprising an effective amount of a gene that expresses HIF-1, EPAS-1, MCP-1, GM-CSF, or a combination thereof.

46. (Original) The method of Claim 45, wherein the vector is a plasmid vector or an adenoviral vector.

Claims 47-52 (cancelled)

53. (Currently Amended) A method of enhancing myocardial function in a ~~patient~~ subject with impaired myocardial function, which comprises directly administering an effective amount of autologous bone marrow aspirate to myocardium of the ~~patient~~ subject to induce collateral blood vessel formation and improve function of the myocardium as compared with non-administration of the autologous bone marrow aspirate.

Claims 54-61 (cancelled)

62. (Currently Amended) The method of Claim 53, wherein cells of the autologous bone marrow aspirate ~~has~~ have been transfected with at least one vector comprising an effective amount of a gene that expresses HIF-1, EPAS-1, MCP-1, GM-CSF, or a combination thereof.

63. (Original) The method of Claim 62, wherein the vector is a plasmid vector or an adenoviral vector.

Claims 64-69 (cancelled)

70. (Currently Amended) A method of ~~treating an~~ improving atrial or ventricular ~~condition~~ function in ~~the~~ heart muscle of a ~~patient~~ subject, which comprises directly administering an effective amount of autologous bone marrow aspirate to ischemic myocardium of the ~~patient~~ subject to enhance collateral blood vessel development in the heart muscle and to improve the atrial or ventricular function of the heart as compared with non-administration of the autologous bone marrow.

Claims 71-78 (cancelled)

79. (Currently Amended) The method of Claim 70, wherein cells of the autologous bone marrow ~~has~~ have been transfected with at least one vector comprising an effective amount of a gene that expresses HIF1, EPAS1, MCP-1, GM-CSF, or a combination thereof.

80. (Original) The method of Claim 79, wherein the vector is a plasmid vector or an adenoviral vector.

Claims 81-102 (cancelled)